

Technical Data Sheet

General

All monolithic cladding panels made of wood for walls, ceilings or flooring come with a large number of storage, processing and usage instructions. Much more important is the observance of these regulations when it comes to the use of composite elements consisting of composites of different, hygroscopic materials. Technical features need to be nominated, understood and taken into account during transport, storage and assembly as well as general use.

Acoustic elements

Rekton acoustic elements are multilayer composite elements that are manufactured in a sandwiched design. Only in this way is it possible to meet the highest technical and acoustic demands. As a primary carrier and cover material, wood-based panels or wood fibre composites are often used. The materials processed by us generally have standard moisture contents as defined by DIN EN 622. This value also behaves relatively constantly with regard to temporary external influences when the plate material is sealed. By perforating or slitting the plates, as is essential when creating acoustic elements, the structure of the plate is actually sensitively disrupted. It loses its rigidity and react extremely sensitively to fluctuations in temperature and humidity due to the high proportion of cut edges. If one now looks at the physical-technical properties of the materials, one can quickly realise that this composite forms a highly sensitive building element.

Usage

Rekton acoustic elements are only suitable for storage areas and closed rooms in which the following parameters can continuously be ensured: Room temperature: between 18 °C and 26 °C

Relative humidity: from 40% to 65%

Fluctuations of these parameters may only be gradual, so that all materials compounded with one another can adapt in the same way to the changed parameters. An abrupt increase or decrease in temperature or humidity inevitably leads to massive deformations of the acoustic elements, comparable to the effect seen when heating bimetallic composites.

Specifically, this means that when the room air cools down quickly, for example due to the turning down of a heating system and/or the sudden reduction of relative humidity due to the use of an air conditioning system, the elements dry too quickly and too one-sidedly. This can lead to concave deformations on the visible side of the Rekton Acoustic Elements (the elements tend to "bowl in").

The same applies in the reverse case. For example, if the room air warms up quickly due to the rapid start-up of the heating system and/or the sudden increase in relative humidity e.g. due to the use of an air conditioning system, the elements expand too quickly and too one-sidedly. This can lead to convex deformations on the visible side of the Rekton acoustic elements (i.e. the elements tend to "bulge").

In this context, the following points should also be considered as relevant events: Building and residual moisture, extreme solar radiation, additional heating, construction measures in the building, abrupt weather changes with uncontrolled air circulation. In the case of large temperature differences in the cold season between transport and the site of installation, the acoustic elements must rest in the same room for at least 72 hours upright and unpacked before any assembly. Only in this way can a gradual and structurally harmless acclimatisation take place. The central point here is the observance of ambient temperature in direct association with humidity.